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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,631	08/05/2002	Aron Shmaier	UDY	1403

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EXAMINER

HAMDAN, WASSEEM H

ART UNIT PAPER NUMBER

2854

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,631

Applicant(s)

SHMAISER ET AL.

Examiner

Wasseem H Hamdan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-19 and 21-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 23-32, 35 and 36 is/are rejected.
- 7) ☒ Claim(s) 8-13, 15-19, 21, 22, 33 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of :
 - a. claim 29 “a multi-engine printer with a mechanism for fine substrate-position correction, comprising at least 3 printing engines, wherein each adjacent pair of printing engines comprises a first printing station and a second printing station”, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
 - b. claim 34 “using a look-up table to calculate a necessary step displacement of the flexible strip in order to achieve a desired step angular displacement of the rotatable element”, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 25, 27, 30-32, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Cuir et al. (US Patent 5,385,091).

Regarding claims 1 and 30, Cuir et al. discloses a tandem printer with a mechanism for fine substrate-position correction (or the steps of a method of applying a fine positional correction to a substrate on a tandem printer) [FIG. 1; column 2, lines 26-45], comprising:

a first printing station [FIG. 1 (30)];

a second printing station [FIG. 1 (40)];

a rotatable element [FIG. 1 (36, 46)], rotating at a given rotation rate, that receives the substrate after printing thereon by the first printing station and transfers the substrate toward the second printing station [FIG. 1];

a sensor which measures the position of an edge of the substrate during its transfer from the first printing station to the second printing station [FIG. 1 (49a; 49b)]; and

a controller, which applies a corrective step change in angular position of the rotatable element responsive to the measurements of the sensor, without changing the general rotation rate of the rotatable element [FIG. 1; column 7, lines 46-59].

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Regarding claim 2, Cuir et al. discloses wherein the sensor which measures the position of an edge of the substrate is situated on the rotatable element [column 4, lines 13-15; FIG. 1 (49a, 49b, 46, 36); column 6, lines 19-22].

Regarding claim 3, Cuir et al. discloses the sensor which measures the position of an edge of the substrate is adjacent to the rotatable element [column 4, lines 13-15; FIG. 1 (49a, 49b, 46, 36); column 6, lines].

Regarding claims 4, 31 and 32, Cuir et al. discloses a transfer system (or the steps of a method of applying a fine positional correction to a substrate on a tandem printer) [FIG.1 (36)] which transfers the substrate from the first printing station [FIG. 1 (30)] to the second printing station [FIG. 1 (40)], in which the rotatable element [FIG. 1] is comprised;

the transfer system further comprising: a flexible strip, traveling at a given rate and providing motion to the rotatable element, wherein a corrective step displacement of the flexible strip induces the corrective step change in angular position of the rotatable element [FIG. 1; column 5, lines 40-59].

Regarding claim 5, Cuir et al. discloses wherein the flexible strip rotates at a constant rate [column 8, lines 5-9].

Regarding claims 6 and 36, Cuir et al. discloses wherein the flexible strip is a timing belt [column 8, lines 5-9; FIG. 1].

Regarding claims 7 and 35, Cuir et al. discloses at least one pulley that provides the corrective step displacement of the flexible strip [FIG. 1 (43)].

Regarding claim 25, Cuir et al. discloses wherein the tandem printer is a conventional printer which uses plates [FIG. 1; column 2, lines 30-33].

Regarding claim 27, Cuir et al. discloses wherein the tandem printer is an electronic printer [FIG. 1; column 2, lines 53-68].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 23, 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuir et al. (US Patent 5,385,091) in view of Eakin (US Patent 5,963,770).

Regarding claim 23, Cuir et al. discloses the essential elements of the claimed invention except a duplex printer for printing on both sides of the paper while inverting it. Eakin discloses a duplex printer for printing on both sides of the paper [FIG. 1; column 1, lines 10-12]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Cuir et al. by including a duplex printer for printing on both

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sides of the paper, since it would be beneficial for the purpose of saving papers and the thickness of the printed documentation.

Regarding claim 26, Cuir et al. discloses the essential elements of the claimed invention except wherein the tandem printer is an electrostatic printer. Eakin discloses the tandem printer is an electrostatic printer [FIG. 1; column 1, lines 20-23]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Cuir et al. by including the tandem printer is an electrostatic printer, since it would be beneficial for the purpose of permanently fuse the image to the substrate.

Regarding claim 28, Cuir et al. discloses the essential elements of the claimed invention except wherein the tandem printer is a lithographic printer. Eakin discloses wherein the tandem printer is a lithographic printer [FIG. 1; column 1, lines 45-46]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Cuir et al. by including wherein the tandem printer is a lithographic printer, since it would be beneficial for the purpose of repelling the water and retain the ink in the printing process.

Regarding claim 29, Cuir et al. discloses the essential elements of the claimed invention except wherein the tandem printer has at least 3 printing engines, wherein each adjacent pair of printing engines comprises a first printing station and a second printing station. Eakin discloses at least 3 printing engines, wherein each adjacent pair of printing engines comprises a first

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printing station and a second printing station [FIG. 1]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Cuir et al. by including at least 3 printing engines, wherein each adjacent pair of printing engines comprises a first printing station and a second printing station, since it would be beneficial for the purpose of having the printer to function as multipurpose function printer.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cuir et al. (US Patent 5,385,091) in view of Furst et al. (US Patent 6,219,516 B1).

Regarding claim 24, Cuir et al. discloses the essential elements of the claimed invention except tandem printer comprises a multicolour printer of single-side printing, with each colour being printed with a different one of the tandem series of printing engines. Furst et al. discloses tandem printer comprises a multicolour printer of single-side printing, with each colour being printed with a different one of the tandem series of printing engines [FIG. 4]. It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the teachings of Cuir et al. by including tandem printer comprises a multicolour printer of single-side printing, with each colour being printed with a different one of the tandem series of printing engines, since it would be beneficial for the purpose of having the flexibility to print more than one color.

Allowable Subject Matter

8. Claims 8-13, 15-19, 21, 22, 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, the prior art of records does not teach all the combined elements / and or components for printer including pulleys pressing into the flexible strip at a first point and a second point, respectively, wherein when pressure of one pulley is partially released, the other pulley takes up the thus produced slack, providing the corrective step displacement of the flexible strip.

Regarding claim 33, the prior art of records does not teach all the combined steps for printer including the steps:

applying the positive step displacement to the flexible strip comprises:

releasing flexible strip slack upstream of the rotatable element; and

taking up flexible strip slack downstream of the rotatable element; and

applying the negative step displacement to the flexible strip comprises:

releasing flexible strip slack downstream of the rotatable element; and

taking up flexible strip slack upstream of the rotatable element.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wasseem H Hamdan whose telephone number is (703) 305-3968.

The examiner can normally be reached on M-F (first Friday off) 6:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Andrew H Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.



Wasseem H. Hamdan
September 5, 2003



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